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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

BEFORE THE  
**Federal Communications Commission**

WASHINGTON, D.C. 20554

In the Matter of

**Amendment of the Commission's  
Rules to Establish New Personal  
Communications Services**

) GEN Docket No. 90-314  
) ET Docket No. 92-100  
)

) RM-7140, RM-7175, RM-7617,  
) RM-7618, RM-7760, RM-7782,  
) RM-7860, RM-7977, RM-7978,  
) RM-7979, RM-7980  
)

) PP-35 through PP-40, PP-79,  
) through PP-85  
)

TO: The Commission

**REPLY COMMENTS OF ARCH COMMUNICATIONS GROUP, INC.**

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January 8, 1993

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## SUMMARY

Arch Communications Group, Inc. submits the following observations in response to the comments filed in the PCS rulemaking proceeding:

### Narrowband PCS

- Arch supports the adoption by the Commission of procedures that will foster the prompt implementation of narrowband PCS services in the marketplace. Arch disagrees, however, that the severance of the proceeding is the best means of accomplishing this end. So far, the consolidation of wideband and narrowband PCS issues appears to have accelerated the timetable for the narrowband allocation.
- The Commission should adopt a channel plan and service definitions that will promote the development of new services, rather than the proliferation in new bands of existing services. Arch continues to support a flexible channel plan with frequency assignments in the 50 kHz to 100 kHz range.
- Telocator's service area proposal, which has 5 regions based upon natural serving territories, has been endorsed by a number of knowledgeable industry players. Based upon this wealth of support, the Commission should proceed with a regional licensing plan along the lines suggested by Telocator.
- Arch remains resolute in its belief that not all of the narrowband PCS spectrum should be allocated on a nationwide basis. However, the reservation of a relatively small portion of the available spectrum for those wishing to provide a nationwide service could serve unmet needs. Arch would not support nationwide licenses if the Commission was inclined to grant relatively large amounts of spectrum to each licensee (i.e. greater than 100 kHz per applicant). The coupling of nationwide service territories with large channel bandwidths would reduce licensing opportunities to too great an extent.
- From the multitude of comments filed, the use of a lottery selection technique has emerged as a consensus position, but only insofar as the Commission adopts strict anti-speculation mechanisms. In this regard,

Arch notes that its recommendations in its original comments filed in favor of detailed technical showings and reasonably high up-front application fees also were mentioned by numerous other parties as promising methods of deterring speculation by insincere applicants.

- Arch disagrees with those who propose the adoption of restrictions on the transfer of narrowband PCS permits and licenses as an effective anti-speculation device. Unfortunately, the history of communications licensing indicates that efforts to deter speculation will be, at best, only partially successful. Under these circumstances, the free transferability of licenses will serve the public interest by enabling the transfer of authorizations from those less interested in providing service to the public to those who are more interested in providing such service.
- Arch disagrees with those who advocate that there should be no eligibility restrictions with respect to narrowband PCS services. Arch recommends that holders of cellular licenses and/or wideband PCS licenses should not be eligible to hold narrowband PCS licenses. This is not because they are unqualified to provide narrowband PCS services, but rather because they will already control sufficient spectrum to enable them to offer narrowband services. Arch supports diversity, but believes it can be achieved by having different entities provide similar service on different frequencies.
- Arch disagrees with those commentators who claim they were entitled to receive narrowband PCS pioneer preferences. Arch agrees that MTEL has failed to distinguish itself to entitle it to the preference tentatively granted by the Commission, but does not believe the answer is to elevate others to a preferred licensing status.

#### Wideband PCS

- Generally, Arch understands that the need for wideband PCS spectrum can only be met by clearing presently used bands since there is no remaining reserve adequate to accommodate this new service. Arch believes, however, that the Commission should permit microwave users to retain their channels indefinitely if they elect to devote them to PCS uses. Since the Commission has recognized that PCS encompasses a family of services that can be offered over a variety of bandwidths, it should not dismiss the possibility that existing

microwave users could elect to hold onto their  
microwave channels and convert them to PCS uses.

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TO: The Commission

**REPLY COMMENTS OF ARCH COMMUNICATIONS GROUP, INC.**

Arch Communications Group, Inc. ("Arch") hereby submits its Reply Comments in the above-referenced proceeding in which the Commission seeks to establish rules governing the Personal Communications Services ("PCS"). In reply, the following is respectfully shown:

**I. Overwhelming Support Exists  
for the Narrowband PCS Allocation**

1. The Notice of Proposed Rulemaking, 7 FCC Rcd. 5676 (1992) (the "Notice") proposes that three distinct 1 MHz bands of 900 MHz spectrum (901-902 MHz, 930-931 MHz and 940-941 MHz) be allocated for narrowband PCS operations. In its comments filed

on November 9, 1992 (the "Arch Comments"), Arch strongly supported the Commission's decision to include all 3 MHz of spectrum from the previously reserved bands in the current narrowband PCS allocation. A review of the submissions by others who commented upon the narrowband PCS allocation indicates that Arch is in good company. By Arch's count, more than 20 parties submitted comments specifically addressing the 900 MHz allocation for narrowband PCS.<sup>1/</sup> The commenters represent a broad spectrum of entities with diverse communications-related interests. Almost without exception, these commenters enthusiastically support the Commission's decision to allocate the designated 900 MHz spectrum for narrowband PCS uses.

2. In reviewing the various comments, Arch notes that many of the key positions advocated in the Arch Comments enjoy considerable support when the wealth of comments are viewed as a whole. For example, Arch advocated a 900 MHz channel plan which subdivided the spectrum into a mixture of 50 kHz and 100 kHz

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<sup>1/</sup> See comments of American Paging, Inc., American Petroleum Institute, Arch Communications Group, Inc., BellSouth, Dr. Charles I. Berlin, Corporate Technology Partners, Dial Page, Inc., Ericsson Corporation, Florida Cellular RSA Limited Partnership, Freeman Engineering Associates, Inc., Global Enhanced Messaging Venture, In-Flight Phone Corporation, Kleiner, Perkins, Caufield & Byers, Matsushita Communications Industrial Corporation of America, Metriplex, Inc., Metrocall of Delaware, Inc., Mobile Telecommunication Technologies Corporation, Motorola, Inc., National Association of Business and Educational Radio, Inc., NYNEX Corporation, PacTel Paging, PageMart, Inc., Paging Network, Inc., Southwestern Bell Corporation, Telecommunications Industry Association, Telocator, The United States Small Business Administration, the United States Telephone Association and the Utility Telecommunications Council.

channels, some of which would be paired and others which would be offered on an unpaired basis. Arch believes that a channel plan of this nature will foster competition and diversity of services, and will create a variety of licensing opportunities for existing licensees and newcomers alike. Similar proposals were recommended by American Paging, Inc. ("API")<sup>2/</sup>, BellSouth<sup>3/</sup>, Dial Page, Inc.<sup>4/</sup>, Ericsson Corporation<sup>5/</sup>, Mobile Telecommunication Technologies Corporation ("MTEL")<sup>6/</sup>, PacTel Paging ("PacTel")<sup>7/</sup> and Southwestern Bell Corporation ("SWB")<sup>8/</sup>. Little support can be found in the comments for granting significantly larger blocks of spectrum to a smaller number of licensees. Consequently, Arch continues to support a flexible channel plan with frequency assignments in the 50 kHz to 100 kHz range.

3. Several commenters have supported the allocation of at least some 25 kHz channels because this conforms to

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<sup>2/</sup> API supports the proposed 50 kHz channelization plan with 20 paired and 20 unpaired frequencies.

<sup>3/</sup> BellSouth Comments at p. 26 (supporting 50 kHz channels, 20 paired and 20 unpaired).

<sup>4/</sup> Dial Page Comments at p. 6 (asymmetrical channel pairings based upon a 50 kHz per licensee limit).

<sup>5/</sup> Ericsson Comments at p. 26 (no need for channel bandwidths greater than 50 kHz).

<sup>6/</sup> MTEL Comments at p. 8 (proposing a mixture of 25 to 50 kHz channels).

<sup>7/</sup> PacTel Comments at Attachment 2 (unpaired and asymmetrically paired channels including a mixture of 25, 50 and 100 kHz channels).

<sup>8/</sup> SWB Comments at p. 5 (25 or 50 kHz blocks).



existing paging allocations.<sup>9/</sup> Arch continues to be concerned that conforming the narrowband PCS allocation to existing paging allocations will serve to inhibit the development of advanced services. Rather, carriers may be inclined to simply transport "plain old paging service" technology to the new band. The Commission should adopt a channel plan and service definitions that will promote the development of new services, rather than the proliferation in new bands of existing services. See Arch Comments at p. 7. Avoiding 25 kHz spacing will be a step in the right direction.

4. The comments also provide remarkable consistency in recommending the adoption of a regional licensing plan that subdivides the country into a handful of large geographic regions.<sup>10/</sup> In particular, Telocator's service area proposal, which has 5 regions based upon natural serving territories, has been endorsed by a number of knowledgeable industry players.<sup>11/</sup> Based upon this wealth of support, the Commission should proceed with a regional licensing plan along the lines suggested by Telocator. See Telocator Comments at p. 12 and Attachment 1.

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<sup>9/</sup> See Ericsson Comments at p. 26, MTEL Comments at p. 8, PacTel Comments at Attachment 2, PageMart Comments at p. 7, SWB Comments at p. 5, Telocator Comments at p. 9.

<sup>10/</sup> See Motorola Comments at p. 20, Metrocall Comments at p. 25, PageNet Comments at p. 9.

<sup>11/</sup> See API Comments at p. 5, Dial Page Comments at p. 7, Freeman Engineering Comments at pp. 8-9, PacTel Comments at pp. 14-15.

5. With respect to licensing mechanisms, the comments again echo the position advocated by Arch. The use of a lottery selection technique emerges as a consensus position, provided that the Commission adopts strict anti-speculation mechanisms.<sup>12/</sup> In this regard, Arch notes that its recommendations in favor of detailed technical showings and reasonably high up-front application fees also were mentioned by numerous other parties as promising methods of deterring speculation by insincere applicants.<sup>13/</sup>

6. Finally, the comments exhibit consistent support for the adoption of minimal technical standards for narrowband PCS.<sup>14/</sup> And, the specific proposal to base height/power limits for the 900 MHz narrowband PCS spectrum on those which presently apply to 900 MHz paging operations under Part 22 of the rules was generally endorsed by knowledgeable industry participants. See,

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<sup>12/</sup> See, e.g., Dial Page Comments at pp. 8-9, NABER Comments at p. 9, PacTel Comments at pp. 35-38, Telocator Comments at p. 14, SBA Comments at pp. 25-26, UTC Comments at pp. 35-36.

<sup>13/</sup> See, e.g., API Comments at p. 7 (supporting high application fees); Dial Page Comments at p. 9 (high application fees); In-Flight Comments at p. 3 (high filing fees); PacTel Paging Comments at pp. 35-38 (detailed technical showings and a two-tiered fee structure proposed); UTC Comments at pp. 35-36 (high filing fees and extensive engineering documentation proposed).

<sup>14/</sup> See Freeman Comments at p. 11; Metrocall Comments at pp. 21-23; Motorola Comments at pp. 22 and Appendix A.

e.g., MTEL Comments at p. 7, PacTel Comments at p. 28, Telocator Comments at p. 18.<sup>15/</sup>

**II. Arch's Position Has Evolved in  
Some Respects Based Upon the Comments**

7. As a major participant in the messaging business with a serious intention of participating in the development of narrowband PCS services in the future, Arch has reviewed the many comments filed regarding the narrowband PCS allocation with an open mind in an effort to give thoughtful consideration to the very important issues that are involved in this allocation. In some important respects, the comments have caused Arch to rethink earlier-stated positions in the docket.

8. Originally, Arch opposed the issuance of any narrowband PCS licenses on a nationwide basis. Arch was concerned that the adoption of nationwide service territories would have a preclusive effect which reduced licensing opportunities, and would create a competitive imbalance as between holders of nationwide and regional licenses. Arch was impressed, however, by the amount of support which emerged in the comments of others for the designation of at least some of the narrowband PCS licenses as nationwide. API, Metriplex, MTEL,

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<sup>15/</sup> However, a number of commentators correctly note that the 901-902 MHz band is well suited to low powered return link communications and should be devoted to uses of this nature. See, e.g., Dial Page Comments at p. 7; Freeman Comments at p. 11; Metriplex Comments at p. 12; Telocator Comments at p. 18.

Motorola, PageMart, PageNet, Telocator, Ericsson, Freeman, In-Flight, Matsushita and NABER all support the dedication of at least some portion of the 900 MHz narrowband PCS allocation to nationwide service.

9. Arch remains resolute in its belief that not all of the narrowband PCS spectrum should be allocated on a nationwide basis. There remains a substantial unsatisfied demand for wide-area services limited to particular regions, and carriers who have devoted themselves to regional service have been particularly successful in the paging marketplace. The Commission must, therefore, reserve a substantial portion of the spectrum for licensing according to the 5-region plan earlier endorsed by Arch. However, the reservation of a relatively small portion of the available spectrum for those wishing to provide a nationwide service could serve unmet needs.

10. The evolution in Arch's thinking derives in part from the overwhelming support for smaller rather than larger bandwidths in the narrowband PCS allocation. Arch would not support nationwide licenses if the Commission was inclined to grant relatively large amounts of spectrum to each licensee (i.e. greater than 100 kHz per applicant). The coupling of nationwide service territories with large channel bandwidths would reduce licensing opportunities to too great an extent.

**III. Some Positions Advocated by Other  
Commenting Parties Would Have Unintended Consequences**

11. Not surprisingly, Arch disagrees with positions taken by some of the other commenting parties. In several instances, however, these disagreements are based not upon philosophical or policy differences, but upon different perceptions of the result that would occur if particular actions are taken. Arch believes that certain policies advocated by others would have unintended consequences.

12. For example, the comments exhibit nearly unanimous support for proceeding with the narrowband PCS allocation expeditiously. Many parties have suggested that the best way to accomplish this would be to sever the narrowband portion of the PCS proceeding from the wideband portion.<sup>16/</sup> The rationale is that the 900 MHz allocation involves reserve spectrum, and, as a result, does not raise difficult issues of spectrum clearing and frequency coordination which pertain to the wideband allocation.

13. Arch supports the adoption by the Commission of procedures that will foster the prompt implementation of narrowband PCS services in the marketplace. Arch disagrees, however, that the severance of the proceeding is the best means of accomplishing this end. So far, the consolidation of wideband and narrowband PCS issues appears to have accelerated the

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<sup>16/</sup> The severance of the narrowband PCS portion of the docket is specifically endorsed by API, Dial Page, MTEL, PacTel, PageNet, SWB, Florida Cellular, Freeman, Metrocall and NABER.

timetable for the narrowband allocation.<sup>17/</sup> There appears to be an overwhelming consensus regarding the need to proceed expeditiously with PCS in order to maintain U.S. competitiveness in the world telecommunications market. Arch believes that this political consensus should be used to expedite the entire docket rather than commencing subdividing it into a multitude of proceedings.

14. Moreover, Arch continues to be concerned that the severance of the narrowband docket for early consideration could cause the 900 MHz band to become a target of speculators if it is the first band to become available for any form of PCS services. Companies whose real interest is wideband PCS would appear to have nothing to lose by filing applications for narrowband PCS channels if those were the only channels available at a particular point in time.<sup>18/</sup> Ultimately, the prompt implementation of narrowband PCS services will not be fostered if the narrowband PCS application procedure is brought to a standstill by a flood of applications.

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<sup>17/</sup> In view of the diversity of rulemaking requests that had been filed with respect to the 900 MHz reserve spectrum, it is possible the Commission could have proceeded with a Notice of Inquiry rather than with a Notice of Proposed Rulemaking as a first step toward allocating narrowband PCS spectrum. The coupling of the narrowband and wideband dockets led to an elimination of this time consuming, procedural step.

<sup>18/</sup> This concern would abate if the Commission adopted rules prohibiting parties from applying for both narrowband and wideband spectrum as Arch recommends.

15. Arch also disagrees with those who propose the adoption of restrictions on the transfer of narrowband PCS permits and licenses as an effective anti-speculation device.<sup>19/</sup> Arch would support the adoption of transferability restrictions if it was confident that Arch would be successful in the licensing process and that speculators would not. Unfortunately, the history of communications licensing indicates that efforts to deter speculation will be, at best, only partially successful.<sup>20/</sup> Also, there is no way that the Commission can guarantee that every qualified applicant will in fact receive a license. Under these circumstances, the free transferability of licenses will serve the public interest by enabling the transfer of authorizations from those less interested in providing service to the public to those who are more interested in providing such service. Thus, Arch joins PacTel, Telocator and Freeman, all of whom endorse the free transferability of narrowband PCS authorizations notwithstanding their strong support for other procedures designed to deter speculation.<sup>21/</sup>

16. Arch also disagrees with those who advocate that there should be no eligibility restrictions with respect to

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<sup>19/</sup> Restrictions on the transfer of PCS permits and licenses were advocated by SBA and UTC.

<sup>20/</sup> See Notice at p. 34.

<sup>21/</sup> See PacTel Comments at p. 53, Telocator Comments at p. 15, Freeman Comments at p. 6.

narrowband PCS services.<sup>22/</sup> Those supporting broad eligibility requirements generally argue that the public will be benefitted by a diversity of services if a broad cross-section of industry participants are eligible for narrowband PCS licenses. Again, however, Arch believes that these commenters are missing the point. Arch recommends that holders of cellular licenses and/or wideband PCS licenses should not be eligible to hold narrowband PCS licenses. This is not because they are unqualified to provide narrowband PCS services, but rather because they will already control sufficient spectrum to enable them to offer narrowband services.<sup>23/</sup> Thus, Arch supports diversity, but believes it can be achieved by having different entities provide similar service on different frequencies.

17. The Commission continues to relax its rules to accord licensees flexibility to devote spectrum to a variety of beneficial uses. See discussion at Notice, n. 48. Cellular licensees and those who receive wideband PCS licenses will have control of significant amounts of spectrum and be operating under rules that will enable them to subdivide the spectrum in a variety of ways according to their perceived market needs. Why should cellular providers and wideband PCS providers also be

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<sup>22/</sup> Broad eligibility was favored by API, MTEL, PacTel, PageNet, Telocator, Freeman, NABER and UTC.

<sup>23/</sup> The Notice even proposes to further relax the technical standards under which cellular carriers operate in order to further their ability to provide both wideband and narrowband PCS services over their cellular channels. Notice, p. 29.



entitled to preempt narrowband PCS spectrum, when they can provide narrowband services over other channels?

18. The number of parties who have commented on the narrowband PCS allocation indicates that there will be a significant number of applicants for these channels. Reasonable restrictions on eligibility which reduce the pool of applicants will actually encourage diversity in the composition of service providers, rather than limit it. Arch urges the Commission to give serious consideration to its proposal to limit the eligibility of cellular licensees and/or wideband PCS licensees to provide narrowband PCS services in the 900 MHz spectrum range.

19. Finally, Arch disagrees with those commentators who claim they were entitled to receive narrowband PCS pioneer preferences.<sup>24/</sup> Most of these claims are based in substantial part on the contention that MTEL's proposal, which was tentatively granted a preference by the Commission, was no more innovative than any other.<sup>25/</sup> Arch agrees that MTEL has failed to distinguish itself, but does not believe the answer is to elevate others to a preferred licensing status.<sup>26/</sup>

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<sup>24/</sup> See, e.g., BellSouth Comments at pp. 15-18; GEM Comments at pp. 2-4; Metriplex Comments at pp. 5-13; PageMart Comments at pp. 3-7; PageNet Comments at pp. 29-50.

<sup>25/</sup> See, e.g., PageNet Comments at p. 44-46; BellSouth Comments at pp. 15-18; PageMart Comments at pp. 18-21.

<sup>26/</sup> The recurring claims that the preference standard has been unevenly and unfairly applied supports Arch's position in its original comments that the Commission has unwisely lowered the threshold that a proponent must meet to get a preference.

#### IV. Comments on the Wideband PCS Allocation

20. In its original comments in this proceeding, Arch limited itself to addressing issues respecting the narrowband PCS allocation, which is the focus of its principal interest. However, in the course of reviewing the many comments filed in the consolidated proceeding for purposes of ascertaining substantive positions on narrowband issues, certain concerns respecting the wideband allocation arose. This section of Arch's Reply Comments addresses these wideband issues.

21. In addition to holding various common carrier and private carrier radio channels that are devoted principally to paging services, Arch is a 2 GHz microwave licensee and uses the facilities to control its radio paging operations. Thus, Arch stands to be impacted by the Commission's proposal to clear a portion of the microwave spectrum in order to accommodate wideband PCS uses. Consequently, Arch has a *bona fide* interest in the manner in which the incumbent microwave licensees are treated.

22. Generally, Arch understands that the need for wideband PCS spectrum can only be met by clearing presently used bands since there is no remaining reserve adequate to accommodate this new service. Arch also commends the Commission for its efforts to adopt procedures designed to protect the legitimate interests of incumbent microwave licensees. There is, however, one possibility that does not appear to have been fully explored

in the Commission's Notice or the resulting comments. Arch believes the Commission should permit microwave users to retain their channels indefinitely if they elect to devote them to PCS uses. The microwave licensee could either integrate the channels into the operations of the wideband licensee operating on the adjoining channels in the same area pursuant to a frequency coordination agreement, or devote the channels to a separate PCS service.

23. In other regulatory contexts, the Commission has accorded incumbent licensees preferred positions in the provision of new services on previously licensed spectrum. For example, when the provision of paging services over FM subcarrier frequencies was demonstrated to be technically feasible, the Commission accorded FM licensees the right either to provide this service themselves or to sublicense the subcarriers to other entities. Amendment of Parts 2 and 73 of Commission's Rules Concerning Use of Subsidiary Communications Authorizations, First Report and Order, 53 RR 2d 1519; recon. denied, 55 RR 2d 1607; stay denied, 56 RR 2d 530 (1984).

24. Since the Commission has recognized that PCS encompasses a family of services that can be offered over a variety of bandwidths, it should not dismiss the possibility that existing microwave users could elect to hold onto their microwave channels and convert them to PCS uses. Such a proposal would encourage diversity in the identity of PCS providers, and increase competition. It also would further mitigate the adverse

effects of having to relinquish the channels from traditional point-to-point microwave uses.

25. Another concern of Arch as it reviewed the wideband PCS comments relates to the potential health hazards associated with the use of 2 GHz, hand-held PCS units. As earlier noted, Arch's principal interest is in the narrowband PCS allocation, which it intends to devote principally to one-way communications services. Nevertheless, every participant in the mobile communications industry will be adversely effected if the Commission allows a wideband PCS allocation to go forward without giving adequate attention to potential health hazards of 2 GHz transmissions in close proximity to people.

26. As a major provider of paging services, Arch is constantly having to secure state and local approvals associated with the operation of transmitting facilities which emit electromagnetic radiation. In recent years, the concerns of state and local municipalities over the potential health hazards of radio transmissions have increased. While Arch believes that much of the concern is based upon inadequate information, it is not anxious to see any mobile services go forward which will exacerbate existing health concerns.

27. Arch urges the Commission to address the health implications of the wideband PCS allocation exhaustively in the Report and Order so that a substantial and adequate record has been developed regarding the health and safety of the new service. (See Responsibility of FCC to Consider Biological

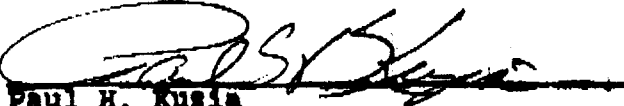
Effects of Radiofrequency Radiation When Authorizing Use of  
Radiofrequency Devices, Report and Order, 100 FCC 2d 843 (1985),

**V. Conclusion**

28. The foregoing premises having been duly considered, Arch Communications Group, Inc. respectfully requests that the Commission proceed with the allocation of spectrum for new Personal Communications Services after having given due consideration to the comments herein.

Respectfully submitted,

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Dated: January 8, 1993

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CERTIFICATE OF SERVICE

I, Lois L. Trader, a secretary in the law firm of Bryan Cave, do hereby certify that on this 8th day of January, 1993 copies of the foregoing **Reply Comments of Arch Communications Group, Inc.** were mailed, postage prepaid, or hand delivered where indicated, courier charges prepaid, to the following:

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